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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

Trajectories of psychological distress among Canadian adults who experienced parental addiction in childhood

by Kellie A. Langlois and Rochelle Garner

Abstract

Background

Childhood experiences can influence mental health in adulthood. Parental addiction is a relatively common adverse experience in childhood. However, understanding of the relationship between parental addiction and levels of distress over the adult life course is incomplete.

Data and methods

Data are from the National Population Health Survey longitudinal file (1994/1995 to 2010/2011). Sex-specific trajectories of psychological distress in relation to exposure to parental addiction in childhood were examined among Canadian adults from ages 18 to 74.

Results

Psychological distress levels decreased with age, but were consistently higher throughout the life course among individuals who experienced parental addiction in childhood, compared with those who did not. The gap in psychological distress scores by parental addiction status was wide in young adulthood, but narrowed as individuals aged.

Interpretation

Exposure to parental addiction in childhood can be associated with psychological distress well into adulthood, but levels decrease over time.

Keywords

Alcohol abuse, child abuse, child of impaired parents, longitudinal studies, parenting, social problems, substance-related disorders

Authors

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Childhood experiences can influence mental health into adulthood. Physical and sexual abuse and neglect in childhood have been shown to have long-term negative health outcomes, including depression, anxiety and anger.[1-3] In a study of harmful childhood exposures, substance abuse by a household member was the most common.[4]

However, the relationship between parental addictions and mental health outcomes in offspring is not straightforward. Substance abuse/Addiction often co-exists with other adverse childhood experiences, such as physical abuse.[5,6] The household environment of children of addicted parents is frequently characterized by negative family functioning, instability, and a lack of parental support.[7] As well, the children of addicted parents tend to be more likely to abuse substances themselves,[8,9] to have poor coping skills and depression as adults,[10,11] and to exhibit antisocial behaviours.[9] Such factors complicate potential associations between parental addiction and mental health.

Psychological distress is a concept that captures both depression and anxiety.[12] No previous studies have analyzed patterns of psychological distress over the life course among adults exposed to parental addiction in childhood. By examining trajectories of distress over time, it is possible to monitor changes as the children of addicted parents become adults. Such information may be important for planning timely and appropriate support for this population.

This study compares trajectories of psychological distress among a nationally representative sample of Canadians aged 18 to 74 who did and did not experience parental addiction in childhood. It was hypothesized that those exposed to parental addiction would have higher levels of psychological distress, particularly in young adulthood.

Methods

Data source

The data used for this study are from cycles 1 to 9 of the National Population Health Survey (NPHS). The NPHS, a longitudinal survey conducted by Statistics Canada, collected information

about health status, health behaviours, and other health determinants from a representative sample of Canadians living in the ten provinces. Members of the Canadian Forces and residents of institutions, First Nations reserves, Canadian Forces bases, and some remote areas in Ontario and Quebec were excluded. Data were collected every two years from 1994/1995 (cycle 1) to 2010/2011 (cycle 9). Details about the NPHS are available elsewhere.[13,14]

In 1994/1995, 20,095 households were selected for the longitudinal panel. In each household, one person was randomly chosen to participate in the survey; of these, 86% completed the General component of the questionnaire (n=17,276). Attempts were made to re-interview the selected respondents every two years. Death and institutionalization were captured as part of the survey. Respondents aged 18 or older were asked the childhood stressor component of the questionnaire.

This study used only information from cycles in which respondents were in the 18 to 74 age range. Baseline was defined as the first cycle in which the respondent was aged 18 or older and had a valid psychological distress score and covariate information. Therefore, baseline cycles and length of follow-up differ.

Measures

Psychological distress

The Kessler Psychological Distress Scale (K6)[15] uses six items to measure the frequency of non-specific symptoms experienced during the previous month: sadness, nervousness, restlessness, hopelessness, worthlessness, and the feeling that everything is an effort. Items are rated on a five-point Likert scale, with responses ranging from "none of the time" (score 0) to "all of the time" (score 4). The final score sums the six items and can range from 0 to 24, with higher scores indicating greater psychological distress. The psychological distress score is the dependent variable in this study and is examined on a continuous scale.

Parental addiction

Parental addiction was assessed by the question, "Did either of your parents drink or use drugs so often that it caused problems for the family?" This was measured in four NPHS cycles. If respondents answered "yes" at any cycle, they were classified as having experienced parental addiction in childhood. Inconsistent responses (reporting "yes" in one or more cycles and "no" in others) were given by 7% of the sample; these respondents were more likely to be married, daily smokers, and to have been physically abused in childhood, compared with those whose reports were consistent (data not shown). Parental addiction was the main independent variable in this study, and was considered time-invariant since exposure was in the past.

Covariates

Covariates were selected based on associations with either parental addiction and/or distress that have been demonstrated in the literature. All covariates except physical abuse in childhood were treated as time-varying predictors, meaning that the responses were allowed to vary over time within-person.

Physical abuse in childhood was assessed by the question, "Were you ever physically abused by someone close to you?" Similar to parental addiction, physical abuse was measured at four NPHS cycles, with respondents who reported "yes" at any cycle being classified as having been physically abused in childhood.

Household income was defined as total household income from all sources in the previous 12 months relative to the low-income cut-off specific to the number of people living in the household. This adjusted income ratio was calculated, and the bottom 20% of the distribution (lowest quintile) and the remaining 80% of the distribution were defined as low income versus not low income, respectively. A third category (missing income) was also included, because about 10% of NPHS respondents did not report their income.

Marital status was defined in two groups: married or living common-law versus not married (widowed, divorced, separated or never married).

Binge/Heavy drinking was defined as consuming five or more drinks on one occasion on a weekly basis during the past year and/or 15 or more drinks for men or 10 or more drinks for women in the past week.

Smoking status was defined by type of smoker: daily smoker versus not daily smoker (occasional, former or never smoker).

Chronic conditions diagnosed by a health professional were examined dichotomously: one or more chronic conditions versus no chronic conditions.

Social support was measured with four questions using an abridged version of the Medical Outcomes Study.[16] Respondents were asked if they had someone to confide in, to give them advice, to count on in a crisis, and to make them feel loved and cared for (cycles 1 and 2) or to love them and make them feel wanted (cycles 3 to 9). Response options were "yes" and "no" (cycles 1 and 2), and "all of the time," "most of the time," "some of the time," "a little of the time," and "none of the time" (cycles 3 to 9). Respondents scored 0 for each question to which they responded "no" (cycles 1 and 2) and "none of the time" or "a little of the time" (cycles 3 to 9); respondents scored 1 for each "yes" or "some of the time" or more often. Scores were summed for a final score ranging from 0 to 4, with higher scores indicating greater social support and categorized as high (3 or 4) versus low (0 to 2).

Analysis

Trajectories of psychological distress were examined over the nine NPHS cycles (16 years); therefore, a maximum of nine observation points per respondent was possible. Respondents who did not provide at least one valid response to the parental addiction question were excluded (n=1,029). Observation points with a missing psychological distress score (23 individuals; 3,946 measurement points) or missing information

on any covariate (35 individuals; 2,109 measurement points) were also excluded. The final sample size for this analysis was 14,403 (men: n=6,663 and 37,424 data points; women: n=7,740 and 45,777 data points) for a total of 83,201 data points. One third of the sample (33.4%) provided nine cycles of valid psychological distress scores; 14.3%, eight cycles; 10.2%, seven; 9.5%, six; 9.1%, five; 7.8%, four; 6.3%, three; 4.5%, two; and 4.8%, one.

Psychological distress trajectories were analyzed using multilevel growth curve modeling, which accommodates unbalanced (not all subjects have the same number of data points) and time-unstructured (not all subjects have equal intervals between data points) data. Growth curve models also have the advantage of using all available data points, so that respondents missing one or more cycles of data are still included. The multilevel model incorporated two independent but linked regression models, designated level-1 and level-2. The level-1 model captured how each person in the sample changed over time (within-person); the level-2 model captured how these changes varied across individuals (between-person).[17] This technique allows for the examination of both intra- and inter-individual differences in psychological distress across age.

Because women tend to experience higher rates of psychological distress than do men,[18] models were analyzed separately by sex. The models were structured with time (level-1) being nested within individuals (level-2). Psychological distress was modeled over age (centered at 18). Because the relationship between distress and age varies, linear, quadratic and cubic rates of change were examined for statistical significance and improvement to the model fit, as measured by change in -2 log likelihood. The best-fit psychological distress trajectory was defined and then modeled with parental addiction in childhood status as the primary independent variable. Interactions between parental addiction status and slope parameters were examined to assess the effect of parental addiction on change in distress scores over the life course. All parental addiction estimates were fixed (were not allow to vary randomly between individuals). Finally, the psychological distress

Table 1
Subject characteristics at baseline, by sex, household population aged 18 to 74, Canada excluding territories

	Men (n=6,663) Parental addiction in childhood						Women (n=7,740) Parental addiction in childhood					
	No (n=5,513)			Yes (n=1,150)			No (n=6,099)			Yes (n=1,641)		
		95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval	
Selected characteristics	%	from	to	%	from	to	%	from	to	%	from	to
Physical abuse in childhood												
No	95.9	95.2	96.5	75.9*	72.0	79.4	90.4	89.5	91.3	65.1*	61.8	68.3
Yes	4.1	3.5	4.8	24.1*	20.6	28.0	9.6	8.7	10.5	34.9*	31.7	38.2
Household income												
Lowest 20%	14.7	13.4	16.1	17.4	14.7	20.5	17.9	16.7	19.2	23.4*	20.6	26.4
Highest 80%	75.0	73.5	76.4	73.7	70.0	77.0	71.4	69.9	72.8	68.9	65.6	71.9
Missing	10.3	9.2	11.6	9.0	6.9	11.5	10.7	9.7	11.9	7.7*	6.1	9.8
Marital status												
Married	54.1	52.7	55.4	61.2*	57.4	64.9	54.5	53.0	55.9	53.4	50.2	56.6
Not married	45.9	44.6	47.3	38.8*	35.1	42.6	45.5	44.1	47.0	46.6	43.4	49.8
Binge/Heavy drinking												
Yes	14.8	13.6	16.0	17.8	15.0	20.9	6.0	5.1	6.9	8.1*	6.6	10.0
No	85.2	84.0	86.4	82.2	79.1	85.0	94.0	93.1	94.9	91.9*	90.0	93.4
Smoking status												
Daily smoker	25.5	24.1	27.0	37.4*	33.6	41.5	21.5	20.3	22.8	37.9*	34.7	41.2
Not daily smoker	74.5	73.0	75.9	62.6*	58.5	66.4	78.5	77.2	79.7	62.1*	58.8	65.3
Chronic conditions												
At least one	49.3	47.7	50.8	55.0*	51.0	58.8	56.5	54.7	58.2	59.5	56.3	62.7
None	50.7	49.2	52.3	45.0*	41.2	49.0	43.5	41.8	45.3	40.5	37.3	43.7
Social support												
Low	6.5	5.7	7.3	9.1*	7.2	11.5	4.5	3.9	5.2	4.8	3.6	6.3
High	93.5	92.7	94.3	90.9*	88.5	92.8	95.5	94.8	96.1	95.2	93.7	96.4

* significantly different from same sex with no parental addiction in childhood ($p < 0.05$)
Note: Baseline is defined as first cycle with no missing information on distress or covariates.
Source: 1994/1995 to 2010/2011 National Population Health Survey, longitudinal sample (square).

trajectory was modeled with all covariates to assess the independent effect of parental addiction when potential confounders—physical abuse in childhood, household income, marital status, binge/heavy drinking, smoking status, chronic conditions and social support—were taken into account.

The best-fitting model for both sexes was a cubic pattern, which captured the non-linear association between age and psychological distress; specifically, distress does not decrease steadily with age, but follows a curvilinear pattern. Intercept and slope parameters were examined for random variation to allow the effects of age on distress to vary across individuals.

In the model for men, estimates for the intercept and linear rate of change varied significantly between individuals. Models would not converge when examining random variation in the quadratic and cubic rates of change; therefore, these estimates were fixed.

In the model for women, estimates for the intercept and for both linear and quadratic rates of change varied between individuals; because of convergence problems, the cubic effect was fixed.

All descriptive statistics were calculated using weighted data that represented the Canadian population. Variance estimates and 95% confidence intervals were calculated using the bootstrap weights to account for the complex sampling design of the NPHS.[19] For growth curve modeling, normalized weights were used and applied to level-2 (individual) of the models. Descriptive analyses were conducted using SUDAAN v.10; the growth curve models were estimated in MLwiN 2.11.

Results

Subject characteristics

The reported prevalence of parental addiction in childhood among members of the study sample was significantly higher for women (19.6%) than for men (15.7%) ($p < .001$; data not shown). Men and women who experienced parental addiction in childhood were more likely

Table 2
Mean distress scores at baseline, by sex and selected characteristics, household population aged 18 to 74, Canada excluding territories

	Men (n=6,663) Parental addiction in childhood						Women (n=7,740) Parental addiction in childhood					
	No (n=5,513)			Yes (n=1,150)			No (n=6,099)			Yes (n=1,641)		
		95% confidence interval			95% confidence interval			95% confidence interval			95% confidence interval	
Selected characteristics	Mean	from	to	Mean	from	to	Mean	from	to	Mean	from	to
Total	2.9	2.8	3.0	3.8*	3.6	4.0	3.6	3.5	3.7	4.6*	4.3	4.8
Age group												
18 to 34	3.3	3.1	3.4	4.4*	4.1	4.7	4.0	3.8	4.2	5.0*	4.7	5.3
35 to 54	2.7	2.6	2.9	3.5*	3.1	3.8	3.5	3.3	3.7	4.1*	3.7	4.4
55 to 74	2.1	1.9	2.4	2.7	2.1	3.3	3.1	2.9	3.3	3.9	3.1	4.7
Physical abuse in childhood												
No	2.8	2.7	2.9	3.5*	3.3	3.8	3.5	3.3	3.6	3.9*	3.7	4.2
Yes	5.0	4.4	5.6	4.7	4.1	5.3	5.2	4.8	5.6	5.8	5.3	6.2
Household income												
Lowest 20%	3.6	3.2	3.9	5.5*	4.8	6.2	4.6	4.2	4.9	5.8*	5.2	6.4
Highest 80%	2.8	2.7	2.9	3.4*	3.2	3.7	3.4	3.2	3.5	4.1*	3.9	4.4
Missing	2.9	2.5	3.3	3.7	2.9	4.6	3.8	3.4	4.1	4.3	3.4	5.2
Marital status												
Married	2.6	2.4	2.7	3.4*	3.1	3.6	3.2	3.1	3.4	4.0*	3.8	4.3
Not married	3.3	3.1	3.5	4.5*	4.1	4.9	4.1	3.9	4.3	5.1*	4.7	5.5
Binge/Heavy drinking												
Yes	3.2	2.9	3.5	4.7*	4.2	5.2	4.4	3.9	5.0	6.0*	5.0	6.9
No	2.9	2.7	3.0	3.6*	3.4	3.9	3.6	3.5	3.7	4.4*	4.2	4.7
Smoking status												
Daily smoker	3.3	3.1	3.5	4.4*	3.9	4.8	4.4	4.1	4.7	5.6*	5.2	6.0
Not daily smoker	2.8	2.6	2.9	3.5*	3.2	3.8	3.4	3.3	3.5	3.9*	3.7	4.2
Chronic conditions												
At least one	3.2	3.0	3.3	4.2*	3.9	4.6	4.0	3.8	4.1	5.0*	4.7	5.3
None	2.6	2.5	2.8	3.3*	3.0	3.6	3.2	3.0	3.3	3.9*	3.6	4.2
Social support												
Low	3.7	3.2	4.3	6.2*	5.3	7.2	6.1	5.3	6.8	9.4*	8.2	10.7
High	2.8	2.7	3.0	3.6*	3.4	3.8	3.5	3.4	3.6	4.3*	4.1	4.5

* significantly different from same sex with no parental addiction in childhood ($p < 0.05$)
Note: Baseline is defined as first cycle with no missing information on distress or covariates.
Source: 1994/1995 to 2010/2011 National Population Health Survey, longitudinal sample (square).

than those who had not to report physical abuse in childhood (Table1). At baseline, men who reported parental addiction were more likely than those who did not to be married, to be daily smokers, to have at least one chronic condition, and to have low social support. Women who reported parental addiction were more likely than those who did not to live in lower-income households, to binge/heavy drink, and to be daily smokers.

Psychological distress scores

Psychological distress scores were higher among people who reported exposure to parental addiction in childhood than among those who did not; at baseline, the distress scores for men were 3.8 versus 2.9, and for women, 4.6 versus 3.6 (Table 2). This discrepancy held for all covariates except for people aged 55 to 74, those who had been physically abused in childhood, and those with missing income data, in which cases distress scores did not differ significantly by parental addiction status.

Growth curve models

Trajectories of psychological distress were analyzed using multilevel growth curve modeling. The best-fitting trajectory for men contained linear, quadratic, and cubic age-related effects (Table 3, Model A). The addition of a parental addiction indicator significantly improved model fit (Model B); that is, men who experienced parental addiction in childhood had significantly higher distress scores at age 18 than did men who had not experienced parental addiction. A (negative) interaction between parental addiction and the linear rate of change in distress scores was statistically significant (Model C), but interactions between parental addiction and the quadratic and cubic rates of change were not significant (data not shown). This suggests that distress scores decrease more quickly with age among men who had experienced parental addiction than among those who had not, a relationship that persisted when controlling for known covariates (Model D).

As was the case for men, the distress trajectory for women was best fit with linear, quadratic, and cubic rates of change (Table 3, Model A). The addition of parental addiction (Model B) significantly improved model fit, and showed significantly higher distress scores at age 18 among women who had experienced parental addiction in childhood than among those who had not. The interaction between parental addiction and the linear rate of change in distress scores (Model C) was statistically significant, suggesting that distress scores decrease faster with age among women who experienced parental addiction.

Table 3
Beta coefficients relating age, parental addiction in childhood and covariates[†] to psychological distress, by sex, household population aged 18 to 74, Canada excluding territories

	Model A (effects of age)	Model B (effects of parental addiction on intercept)	Model C (effects of parental addiction on rate of change	Model D (Model C + all covariates)
Men (37,424 observations)				
Fixed effects				
Baseline (age 18)				
Intercept	3.6077***	3.4964***	3.4479***	2.8741***
Parental addiction	..	0.8177***	1.1756***	0.7852***
Rate of change				
Linear	-0.0850***	-0.0887***	-0.0883***	-0.0596***
Interaction with parental addiction	..	..	-0.0145**	-0.01272*
Quadratic	0.0019***	0.0020***	0.0021***	0.0012**
Cubic	-0.000017**	-0.000018**	-0.000019***	-0.0000126*
Random effects				
Level -1				
Within-person	5.1157***	5.1174***	5.1181***	5.0923***
Level-2				
Intercept variance	3.6835***	3.5096***	3.4954***	2.8433***
Linear term variance	0.0012***	0.0012***	0.0012***	0.0011***
-2 log likelihood	179,310.13	179,175.82	179,163.91	177,884.04
Women (45,777 observations)				
Fixed effects				
Baseline (age 18)				
Intercept	4.4627***	4.3072***	4.2431***	3.5900***
Parental addiction	..	0.7165***	1.0117***	0.4316**
Rate of change				
Linear	-0.1037***	-0.1062***	-0.1046***	-0.0792***
Interaction with parental addiction	..	..	-0.0126**	-0.0065
Quadratic	0.0025***	0.0026***	0.0027***	0.0020***
Cubic	-0.000024***	-0.000025***	-0.000026***	-0.000021***
Random effects				
Level -1				
Within-person	6.4112***	6.4096***	6.4094***	6.3729***
Level-2				
Intercept variance	3.6474***	3.5024***	3.4857***	2.8708***
Linear term variance	0.0106***	0.0106***	0.0105***	0.0101***
Quadratic term variance	0.0000015**	0.0000014*	0.0000014*	0.0000016**
-2 log likelihood	230,203.27	230,098.27	230,087.40	228,262.14

† physical abuse in childhood, household income, marital status, binge/heavy drinking, smoking status, chronic conditions, and social support
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$
.. not applicable
Source: 1994/1995 to 2010/2011 National Population Health Survey, longitudinal sample (square)

The model accounting for covariates (Model D) did not change the effect of parental addiction on the intercept, although the interaction between parental addiction and the linear rate of change was no longer significant ($p = .15$). The loss of significance was not driven by any specific covariate (data not shown).

To illustrate the results, psychological distress trajectories were plotted (Figure 1). Distress scores among men who experienced parental addiction in childhood were consistently higher throughout the life course, with a wider gap at younger ages. The trajectory curves show that from age 50 on, distress scores remained relatively stable among men who had not experienced parental addiction, but among those who had, scores continued to decline. Thus, as men aged, differences in distress scores between the two groups diminished.

The pattern was similar among women: those who had experienced parental addiction in childhood had significantly higher distress scores at age 18 than did those who had not. Scores decreased over the life course, and the gap between women who had and had not experienced parental addiction narrowed.

Discussion

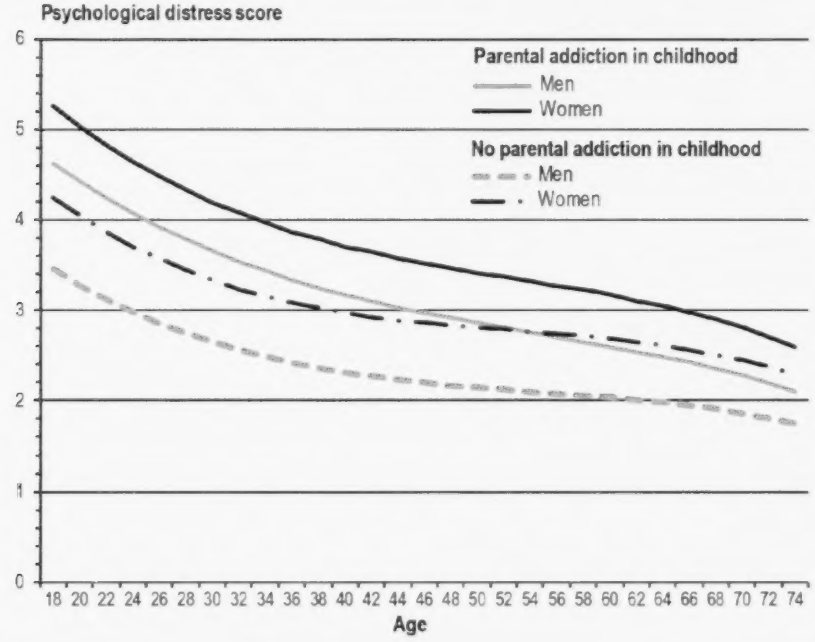
Childhood exposure to parental addiction is relatively common in Canada: about 16% among men and 20% among women. These rates are comparable to results reported for the U.S.[5]

The findings of this analysis are consistent with other research showing a decline in psychological stress at older ages.[20,21] However, the present study is the first to examine longitudinal patterns of distress by parental addiction in childhood. Distress scores fell with advancing age, particularly among those who reported parental addiction. Memory and perceptions of negative events may decrease with age.[22,23] Nonetheless, the gap in distress scores between those who did and did not experience parental addiction in childhood did not close, even at age 74.

A number of cross-sectional studies of adults whose parents had been alcoholics have examined the mental health consequences. For example, Hall and Webster[24] found that, in addition to higher levels of stress, adults who experienced parental alcoholism tend to have impaired abilities to deal with traumatic events, and may adopt stress management techniques that actually increase stress rather than minimize it. As well, these people may have difficulty establishing and maintaining meaningful relationships. This is consistent with another study that found less effective coping strategies and higher rates of avoidant behaviour (smoking, drinking) among adults who were children of alcoholics.[11] Depression and lower self-esteem have also been reported.[10] Although these findings resemble those of the present study, cross-sectional data cannot take the dynamic nature of psychological distress over the life course into account.

The underlying causes of psychological distress are many, and isolating potential risk and protective factors is difficult. Having a parent with a substance addiction often contributes to other challenges during childhood. For example, children of parents who abuse alcohol are more likely to be victims of violence, and to experience parental violence, family break-up, and drug addiction.[9] Hussong et al.[7] found that, compared with control subjects, children of alcoholics were at greater risk for negative stressors (particularly family and financial problems), more likely to report experiencing these stressors chronically or repetitively, and more likely to show greater stress severity in response to negative life events.

Figure 1
Trajectories of psychological distress, by sex and parental addiction in childhood, household population aged 18 to 74, Canada excluding territories



Source: 1994/1995 to 2010/2011 National Population Health Survey, longitudinal sample (square).

What is already known on this subject?

- Childhood experiences can influence mental health in adulthood.
- Parental addiction is a relatively common adverse experience in childhood.
- No previous studies have analyzed patterns of psychological distress over the life course among adults exposed to parental addiction in childhood.

What does this study add?

- Psychological distress decreased with age, but was consistently higher throughout the life course among individuals who experienced parental addiction in childhood, compared with those who did not.
- The gap in psychological distress scores by parental addiction status was wide in young adulthood, but narrowed as individuals aged.

Strengths and limitations

The strengths of this study include the longitudinal nature of the NPHS, the large sample, and the variety of data collected biennially over 16 years.

Nonetheless, this study has a number of limitations. As in all longitudinal research, refusal and loss to follow-up can affect the findings. Bias due to non-response is unknown, but is expected to be minimal owing to multilevel growth curve modeling.[17]

Use of the term "parental addiction" potentially over-generalizes, as it is not possible to determine the severity of substance abuse and/or dependence. However, NPHS respondents were asked if parental drinking or drug use was so frequent that it caused problems for the family, which is how the respondent perceived the seriousness of the situation. Given the consistent pattern of higher distress among people who experienced parental addiction, the question appears valid for the purposes of this analysis.

It was not possible to determine if the addicted parent was the father, mother, or both, which may have different consequences for children.[5,9] As well, the exact age at which the child was exposed to parental addiction and the duration and intensity of that addiction are not known, although they may have implications for long-term distress levels. Additionally, the effects of parental comorbidities, which may be genetically or environmentally associated with psychological distress in offspring, could not be examined.

No consensus exists about what constitutes a clinically meaningful change in psychological distress scores, nor about what a clinically important threshold score is, according to the K6. Therefore, whether the differences in distress scores between those who did and did not report parental addiction are, in fact, meaningful cannot be assessed.

Conclusion

This analysis examines the course of psychological distress among adults who experienced parental addiction in childhood. From ages 18 to 74, individuals who experienced parental addiction had consistently higher distress scores than did those who had not experienced parental addiction. However, the association is complicated by the frequent co-existence of other childhood adversities, parental comorbidities, and a negative family environment. Despite the large sample size and rich longitudinal data, this study only begins to disentangle the mutlifaceted relationship between parental addiction and mental health outcomes for offspring. ■

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